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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/774,965	02/09/2004	Afshin Momtaz	BU3368	8766
7590 Brake Hughes PLC C/O Intellevate P.O. Box 52050 Minneapolis, MN 55402			EXAMINER DEPPEL, BETSY LEE	
			ART UNIT 2611	PAPER NUMBER
			MAIL DATE 04/04/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/774,965

**Applicant(s)**

MOMTAZ, AFSHIN

**Examiner**

BETSY L. DEPPE

**Art Unit**

2611

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6, 17-19, 21-23, 25 and 27-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-6, 17-19, 27 and 28 is/are allowed.
- 6) ☒ Claim(s) 21-23, 25 and 29-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 July 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsman's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. This Office Action is in response to the communications filed January 16, 2008.

#### *Specification*

2. The disclosure is objected to because of the following informalities: in the detailed description, the numerous occurrences of "flip flop" should be "flip-flop". Appropriate correction is required.

#### *Claim Objections*

3. The claims are objected to because of the following informalities:
  - a. in claim 1, line 12, "the equalized feedback" should be "an equalized feedback";
  - b. in claim 2, line 3, "an equalized feedback" should be "the equalized feedback";
  - c. in claim 4, lines 2 and 4, "flip flop" should be "flip-flop";
  - d. in claim 4, line 2, "to" should be inserted before "the clock" for clarification;
  - e. in claim 18, line 4, "a frequency" should be "the frequency";
  - f. in claim 21, line 8, "the clock" should be "the extracted clock"; and
  - g. in claim 30, line 2, ""equalized" should be inserted after "recovered" (see claim 29, line 3.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 21-23 and 25 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The detailed description, as originally filed, does not describe retiming the binary signal as recited in claim 21, lines 7-9 and claim 25, lines 2-3. Based on the detailed description corresponding to Figure 4, multiplication (see "480") of the feedback signal by an equalizer coefficient does not affect the functionality of flip-flop "470" that affects the timing or retiming of the binary signal (D3). Similarly, "modifying the equalization coefficient" as recited in claim 25 does not change the timing of the binary signal via flip-flop "470".
7. The dependent claim(s) are rejected under the same ground(s) as the claim(s) from which they depend.

8. Claims 21-23, 25, and 29-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
9. In claim 21, lines 7-9, it is unclear whether the multiplying step or the equalization coefficient is "based on a frequency difference between a reference clock and the clock signal."
10. In claim 29, lines 6-7, it is unclear how the "received data," the equalized feedback signal," and/or "a reference clock" relate to control of the equalization coefficient. For example, are all three signals combined and the resulting signal used to control the equalization coefficient?
11. The dependent claim(s) are rejected under the same ground(s) as the claim(s) from which they depend.

***Allowable Subject Matter***

12. Claims 1-6, 17-19, 27 and 28 are allowed.
13. The following is an examiner's statement of reasons for allowance: prior art of record does not teach or suggests in combination a communications system comprised of a decision feedback equalizer (DFE) and a clock and data recovery circuit (CDR) wherein the CDR iterates or varies an equalization coefficient of the DFE as recited in claim 1, lines 14-16 and claim 17, lines 16-17, respectively.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BETSY L. DEPPE whose telephone number is (571)

272-3054. The examiner can normally be reached on Monday, Wednesday and Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh M. Fan can be reached on (571) 272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Betsy L. Deppe/  
Primary Examiner  
Art Unit 2611